REMARKS

STATUS OF CLAIMS

Claims 1-26 are pending in the application.

Claims 5, 9 and 18-22 are allowed.

Claims 1-4, 6-8, 10-17 and 23-26 are rejected.

Thus, claims 1-4, 6-8, 10-17 and 23-26 remain pending for reconsideration, which is respectfully requested. No new matter has been added in this Amendment.

CLAIM REJECTIONS – 35 U.S.C. §102 AND §103

Claims 1, 2, 4, 7, 10, 23, and 24 were rejected under 35 U.S.C. 102(b) as being anticipated by Limb (US 5,111,456). Limb is newly cited and newly relied upon.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Perlman (US 5,398,242) and in light of the rejection to claim 1.

Claims 6, 12-14, 16, 17, 25, and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Limb and in light of the rejection to claim 1.

Claims 8 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Ching et al. (US 4,665,514) and in light of the rejection to claim 1. Ching is newly relied upon.

Therefore, the independent claims 1, 10, 12, 13, 16, 23 and 24 are rejected over Limb.

Independent claims 1, 10, 12, 13, 16, 23, and 24 have been amended to further emphasize the patentably distinguishing features of the present invention. Support for the claims amendments can be found, for example, at page 1 of the specification and Figs. 1 and 3.

The present invention described in claims 1, 10, 12, 13, 16, 23, and 24 relates to data transfer between nodes that constitute an "IEEE 1394 topology" and the claimed present invention has a benefit of allowing for simultaneous transfer of data in an "IEEE 1394 topology," which is not disclosed or suggested by Limb.

Unlike to the claimed present invention, Limb (USP 5,111,456) relates to data transfer between stations that are linearly interconnected (Abstract, FIG. 1, col. 3, lines 40-56 and col. 5,

lines 49-51, "stations S1...Sn connected in a chain as shown in FIG. 1). Limb neither suggests nor discloses data transfer between the stations "constituting an IEEE 1394 topology." The communications system of Limb cannot simultaneously transfer data in an "IEEE 1394 topology."

In other words, in contrast to Limb, the claimed present invention as recited in independent claims 1, 10, 12, 13, 16, 23 and 24, using claim 1 as an example, provides:

> 1.   (CURRENTLY AMENDED) A method of transferring packets between a plurality of nodes including a first node, a second node, and a third node connected by a bus but not connected in a ring form, *__the plurality of nodes constituting an IEEE 1394 topology,__* the method comprising:
>
> transferring a *__write packet from the first node to the second node__*;
>
> storing data *__to be written in a data portion of a packet addressed to the third node__* in the data portion of *__the write packet at the second node__*; and
>
> transferring the *__write packet from the second node to the third node__* (emphasis added).

Further, the claimed present invention as recited in independent claims 12, 13, 16, 12 and 24, are patentably distinguishing over Limb, as follows:

INDEPENDENT CLAIM 13

Limb discloses controlling writing cycles of each station (node) according to a predetermined number of packets, as Pmax, to be transmitted, which is determined and recorded in each station (column 5, line 60 to column 6, line 39).

In contrast to Limb, the claimed present invention as recited in independent claim 13 provides "first node, the second node, and the third node not connected in a ring form, *__and the first, second and third nodes being among a plurality of nodes constituting an IEEE 1394 topology,__*" in which the "first node" is "*__transferring a plurality of write packets ... to each of the second and third nodes based upon information indicating that the second and third nodes substantially simultaneously store data in the data portion of the write packets received from the first node.__*" Therefore, in contrast to Limb, in the claimed present invention, the "first node" is informed of "*__information indicating that the second and third nodes substantially simultaneously store data in the data portion of the write packets received__*

from the first node" and the "first node" is "transferring *a plurality of write packets*" based upon such information in the first node.

In other words, independent claim 13 expressly recites a characteristic that node C1, as "a first node," can take advantage in a *non-ring "IEEE 1394"* network topology of FIG. 1 of the present Application (i.e., "*information indicating that the second and third nodes substantially simultaneously store data in the data portion of the write packets received from the first node*").

More particularly, regarding Limb's FIG. 1, there is no disclosure or suggestion that node Si provides the present claimed invention's, "*information indicating that the second and third nodes substantially simultaneously store data in the data portion of the write packets received from the first node*" and to use such information to provide the claimed present invention's "*transferring a plurality of write packets ... to each of the second and third nodes.*" In other words, in Limb, FIG. 1, the node Si does not transfer a *plurality of write packets*.

A benefit of the claimed present invention, with reference to FIG. 1 of the present Application, is to take advantage of data transfer path multiplexing capability of node C1, as the first node, by being located between nodes A1 and E1 as "*second and third nodes substantially simultaneously store data in the data portion of the write packets received from the first node*." Support for independent claim 13 can be found, for example, in page 13, line 5 to page 16, line 24 (page 15, lines 1-4), of the present Application.

Therefore, in contrast to Limb, the claimed present invention as recited in amended independent claim 13 provides,

> 13. (CURRENTLY AMENDED) A packet transfer control
> circuit incorporated in a first node *to transfer a plurality of packets to
> a second node and a third node*, the first node, the second node, and
> the third node *not connected in a ring form, and the first, second
> and third nodes being among a plurality of nodes constituting an
> IEEE 1394 topology,* wherein each packet includes a data portion for
> storing data, the *first node* control circuit comprising:
>
> a processor *transferring a plurality of write packets*, the data
> portion of which is blank, *to each of the second and third nodes
> based upon information indicating that the second and third nodes
> substantially simultaneously* store data in the data portion of the write
> packets received from the first node.

Independent claim 13 is allowable.

INDEPENDENT CLAIMS 12 & 16

Independent claim 12 expressly recites a characteristic that node C1 in FIG. 1 of the present Application, as "a first node," can take advantage in non-ring "IEEE 1394" network topology, by reciting,

> 12. (CURRENTLY AMENDED) A packet transfer control circuit incorporated in a first node *to transfer a packet to a second node and a third node*, in which the first node, the second node, and the third node are *not connected in a ring form, and the first, second and third nodes are among a plurality of nodes constituting an IEEE 1394 topology,* the packet includes a data portion for storing data, *the second node is downstream from the first node, and the third node is upstream from the first node*, the *first node* control circuit comprising:
>
> a processor retaining data addressed to the third node, and *rewriting* the data stored in the data portion of the packet, which is received by the first node from the second node, *to include the retained data addressed to the third node, when the data stored in the data portion of the packet received from the second node is addressed to the third node*.

Also, independent claim 16 recites a characteristic that node C1 in FIG. 1 of the present Application, as "a first node," can take advantage in a non-ring "IEEE 1394" network topology of FIG. 1 of the present Application. In other words, in contrast to Limb, the claimed present invention as recited in independent claim 16 provides:

> 16. (CURRENTLY AMENDED) A packet transfer control circuit incorporated in *a first node to transfer packets to a plurality of second and third nodes*, in which the first, second, and third nodes are *not connected in a ring form, and the plurality of nodes constituting an IEEE 1394 topology,* and each packet includes a data portion for storing data, the *first node* control circuit comprising:
>
> a processor *transferring to each second node a write packet*, the data portion of which stores data, and then *transferring another write packet, the data portion of which is blank, wherein each second node stores data in the blank data portion and transfers the packet to the third nodes*.

As discussed above concerning independent claim 13, Limb does not disclose or suggest the independent claim 16 recitation, "transferring to *each second node a write packet*."

INDEPENDENT CLAIMS 23 AND 24

Limb discloses a bus non-ring network topology including a pair of lines 10 and 11. In contrast to Limb, the claimed present invention is directed to "*a star form ... IEEE 1394 topology*," as recited in independent claims 23 and 24, using claim 23 as an example:

> 23. (CURRENTLY AMENDED) A method of transferring packets between a plurality of nodes connected in *a star form*, the plurality of nodes including a first node, a second node, and a third node, ***the plurality of nodes constituting an IEEE 1394 topology,*** the method comprising:
>
> transferring a ***write packet from the first node to the second node***;
>
> storing data ***to be written in a data portion of a packet addressed to the third node*** in the data portion of ***the write packet at the second node***; and
>
> transferring the ***write packet from the second node to the third node***.

CONCLUSION

In view of the amendments and remarks, withdrawal of the rejections of pending claims and allowance of pending claims is respectfully requested.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Respectfully submitted,
STAAS & HALSEY LLP

Date: November 17, 2004   By: _____

Mehdi D. Sheikerz
Registration No. 41,307

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

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